

Sub 2

2001-05-23

CLAIMS:

1. A wireless communication system comprising:
at least one remote communication device configured to
communicate a return link wireless signal;
an interrogator including:

a communication station configured to receive the return link
wireless signal and to generate a return link communication signal
corresponding to the return link wireless signal;

communication circuitry coupled with the communication
station and configured to communicate the return link communication
signal; and

a housing remotely located with respect to the
communication station and including circuitry configured to receive the
return link communication signal from the communication circuitry and
to process the return link communication signal.

2. The wireless communication system according to claim 1
wherein the communication station includes a low noise amplifier
configured to increase the power of the return link communication
signal.

Salas

205F20-952F3001

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

3. The wireless communication system according to claim 1 wherein the housing includes adjustment circuitry configured to receive the return link communication signal from the communication circuitry and to adjust an electrical characteristic of the return link communication signal.

4. The wireless communication system according to claim 3 wherein the adjustment circuitry is configured to output the return link communication signal at a substantially constant level.

5. The wireless communication system according to claim 3 wherein the adjustment circuitry includes automatic gain control circuitry.

6. The wireless communication system according to claim 5 wherein the automatic gain control circuitry is configured to monitor the power of the return link communication signal and to adjust the power of the return link communication signal responsive to the monitoring.

7. The wireless communication system according to claim 1 wherein the communication circuitry includes a coaxial RF cable.

Sub 92

206120-551801

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

8. The wireless communication system according to claim 1 wherein the communication circuitry includes a plurality of wireless transceivers individually coupled with one of the housing and the communication station.

9. The wireless communication system according to claim 1 wherein the remote communication device comprises a radio frequency identification device.

10. An interrogator of a wireless communication system comprising:

a communication station configured to receive a return link wireless signal and to generate a return link communication signal corresponding to the return link wireless signal;

communication circuitry coupled with the communication station and configured to communicate the return link communication signal; and

a housing remotely located with respect to the communication station and including circuitry configured to receive the return link communication signal from the communication circuitry and to process the return link communication signal.

Sub 92

11. The interrogator according to claim 10 wherein the communication station includes a low noise amplifier configured to increase the power of the return link communication signal.

12. The interrogator according to claim 10 wherein the housing includes adjustment circuitry configured to receive the return link communication signal from the communication circuitry and to adjust an electrical characteristic of the return link communication signal.

13. The interrogator according to claim 12 wherein the adjustment circuitry is configured to output the return link communication signal at a substantially constant level.

14. The interrogator according to claim 12 wherein the adjustment circuitry includes automatic gain control circuitry.

15. The interrogator according to claim 14 wherein the automatic gain control circuitry is configured to monitor the power of the return link communication signal and to adjust the power of the return link communication signal responsive to the monitoring.

16. The interrogator according to claim 10 wherein the communication circuitry includes a coaxial RF cable.

Sub 92

2025-05-20 15:00:00

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

17. The interrogator according to claim 10 wherein the communication circuitry includes a plurality of wireless transceivers individually coupled with one of the housing and the communication station.

18. An interrogator of a wireless communication system comprising:

a plurality of communication stations individually configured to receive return link wireless signals and to generate return link communication signals corresponding to the return link wireless signals; and

a housing remotely located with respect to at least one of the communication stations and including circuitry configured to receive the return link communication signals from the communication stations and to process the return link communication signals.

19. The interrogator according to claim 18 wherein the housing includes adjustment circuitry configured to adjust at least one electrical characteristic of the return link communication signals.

20. The interrogator according to claim 19 wherein the adjustment circuitry includes automatic gain control circuitry.

Sukaz

Figure 1	Figure 2	Figure 3	Figure 4	Figure 5	Figure 6	Figure 7	Figure 8	Figure 9	Figure 10	Figure 11	Figure 12	Figure 13	Figure 14	Figure 15	Figure 16	Figure 17	Figure 18	Figure 19	Figure 20	Figure 21	Figure 22	Figure 23	Figure 24	Figure 25	Figure 26	Figure 27	Figure 28	Figure 29	Figure 30	Figure 31	Figure 32	Figure 33	Figure 34	Figure 35	Figure 36	Figure 37	Figure 38	Figure 39	Figure 40	Figure 41	Figure 42	Figure 43	Figure 44	Figure 45	Figure 46	Figure 47	Figure 48	Figure 49	Figure 50	Figure 51	Figure 52	Figure 53	Figure 54	Figure 55	Figure 56	Figure 57	Figure 58	Figure 59	Figure 60	Figure 61	Figure 62	Figure 63	Figure 64	Figure 65	Figure 66	Figure 67	Figure 68	Figure 69	Figure 70	Figure 71	Figure 72	Figure 73	Figure 74	Figure 75	Figure 76	Figure 77	Figure 78	Figure 79	Figure 80	Figure 81	Figure 82	Figure 83	Figure 84	Figure 85	Figure 86	Figure 87	Figure 88	Figure 89	Figure 90	Figure 91	Figure 92	Figure 93	Figure 94	Figure 95	Figure 96	Figure 97	Figure 98	Figure 99	Figure 100
Figure 1	Figure 2	Figure 3	Figure 4	Figure 5	Figure 6	Figure 7	Figure 8	Figure 9	Figure 10	Figure 11	Figure 12	Figure 13	Figure 14	Figure 15	Figure 16	Figure 17	Figure 18	Figure 19	Figure 20	Figure 21	Figure 22	Figure 23	Figure 24	Figure 25	Figure 26	Figure 27	Figure 28	Figure 29	Figure 30	Figure 31	Figure 32	Figure 33	Figure 34	Figure 35	Figure 36	Figure 37	Figure 38	Figure 39	Figure 40	Figure 41	Figure 42	Figure 43	Figure 44	Figure 45	Figure 46	Figure 47	Figure 48	Figure 49	Figure 50	Figure 51	Figure 52	Figure 53	Figure 54	Figure 55	Figure 56	Figure 57	Figure 58	Figure 59	Figure 60	Figure 61	Figure 62	Figure 63	Figure 64	Figure 65	Figure 66	Figure 67	Figure 68	Figure 69	Figure 70	Figure 71	Figure 72	Figure 73	Figure 74	Figure 75	Figure 76	Figure 77	Figure 78	Figure 79	Figure 80	Figure 81	Figure 82	Figure 83	Figure 84	Figure 85	Figure 86	Figure 87	Figure 88	Figure 89	Figure 90	Figure 91	Figure 92	Figure 93	Figure 94	Figure 95	Figure 96	Figure 97	Figure 98	Figure 99	Figure 100

2025-05-01 10:00:00

1 23. An interrogator of a radio frequency identification system
2 comprising:

3 a communication station including:

4 an antenna configured to receive a return link wireless
5 signal and to output a return link communication signal corresponding
6 to the return link wireless signal; and

7 a low noise amplifier coupled with the antenna and
8 configured to increase the power of the return link communication
9 signal;

10 a coaxial RF cable coupled with the low noise amplifier of the
11 communication station and configured to communicate the return link
12 communication signal; and

13 a housing remotely located with respect to the communication
14 station and including:

15 automatic gain control circuitry coupled with the coaxial RF
16 cable and configured to adjust at least one electrical characteristic of
17 the return link communication signal to output the return link
18 communication signal at a substantially constant level; and

19 processing circuitry configured to receive the return link
20 communication signal from the automatic gain control circuitry and to
21 process the return link communication signal.
22
23
24

Sub 93

2025-03-04

- 1 24. A method of communicating within a wireless communication
- 2 system comprising:
- 3 providing an interrogator and at least one remote communication
- 4 device;
- 5 communicating a return link wireless signal using the remote
- 6 communication device;
- 7 receiving the return link wireless signal within a communication
- 8 station of the interrogator;
- 9 generating a return link communication signal within the
- 10 communication station corresponding to the return link wireless signal;
- 11 communicating the return link communication signal from the
- 12 communication station using communication circuitry; and
- 13 receiving the return link communication signal from the
- 14 communication circuitry within a housing of the interrogator remotely
- 15 located from the communication station.
- 16
- 17 25. The method according to claim 24 further comprising
- 18 amplifying the return link communication signal before the
- 19 communicating the return link communication signal.
- 20
- 21 26. The method according to claim 24 further comprising
- 22 adjusting at least one characteristic of the return link communication
- 23 signal after the receiving the return link communication signal.
- 24

Lab 93

2025-09-23

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

27. The method according to claim 26 wherein the adjusting provides a return link communication signal having a substantially constant level.

28. The method according to claim 26 wherein the adjusting comprises adjusting using automatic gain control circuitry.

29. The method according to claim 24 wherein the providing at least one remote communication device comprises providing a radio frequency identification device.

30. The method according to claim 24 further comprising processing the return link communication signal after the receiving the return link communication signal.

Sub 93

1 31. A method of communicating within a wireless communication
2 system comprising:

3 providing an interrogator having a housing and at least one
4 communication station remotely located from housing;

5 receiving a return link wireless signal within the communication
6 station of the interrogator;

7 generating a return link communication signal within the
8 communication station corresponding to the return link wireless signal;

9 communicating the return link communication signal from the
10 communication station using communication circuitry; and

11 receiving the return link communication signal within the housing
12 from the communication circuitry.

13
14 32. The method according to claim 31 further comprising
15 amplifying the return link communication signal before the
16 communicating the return link communication signal.

17
18 33. The method according to claim 31 further comprising
19 adjusting at least one characteristic of the return link communication
20 signal after the receiving the return link communication signal.

21
22 34. The method according to claim 33 wherein the adjusting
23 provides a return link communication signal having a substantially
24 constant level.

Sub 93

20061225

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

35. The method according to claim 33 wherein the adjusting comprises adjusting using automatic gain control circuitry.

36. The method according to claim 31 wherein the providing comprises providing a plurality of communication stations remotely located from the housing, and the communication stations individually receive return link wireless signals within one of a plurality of communication ranges.

37. The method according to claim 31 further comprising processing the return link communication signal after the receiving the return link communication signal.

add 93
add B7